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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/758,169	01/15/2004	Bernd Jagdhuber	H01.2-11378	4864
490	7590	04/11/2006	EXAMINER	
VIDAS, ARRETT & STEINKRAUS, P.A. 6109 BLUE CIRCLE DRIVE SUITE 2000 MINNETONKA, MN 55343-9185			ROGERS, DAVID A	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 04/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/758,169

Applicant(s)

JAGDHUBER, BERND

Examiner

David A. Rogers

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,4,6-12 and 14-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22 is/are allowed.
- 6) ☒ Claim(s) 1,3,4,6-12 and 14-21 is/are rejected.
- 7) ☒ Claim(s) 6,14 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection as discussed below.

Claim Objections

2. Claims 6, 14, and 15 are objected to because of the following informalities. Claim 6 is written to depend on now cancelled claim 5. Likewise, claims 14 and 15 are written to depend on now cancelled claim 13. This application is being examined assuming that claims 6, 14, and 15 each depend on claim 1. However, the applicant is requested to correct this inadvertent oversight in response to this office action.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3, 4, 6-12, and 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over United States Patent Application Publication 2002/0095998 Kriz *et al.* in view of United States Patent 6,299,841 to Rainin *et al.*, United States Patent Application Publication 2002/0011815 to Gaffney *et al.*, and "Flexiforce Sensors and Flexiforce Applications" to Tekscan.

Kriz *et al.* discloses a proportioning device, as seen in figure 3, comprising a manually operable actuating device (reference item 60); a sensor (force transducer (reference item 92)) associated with the actuating device for detecting a force manually exerted on the actuating device; an electric driving motor (reference item 98); an electric control (reference item 110) for controlling the driving motor during the detection by the sensor; an electric voltage supply (reference item 48); and a displacement device (reference item 20) coupled to the actuating device. The voltage supply must be connected to the controller and the sensor in order to provide power to both. The controller receives signals from the sensor via a signal line (reference item 94).

With regard to claim 3 the actuating device operates against the force of a spring (reference item 91).

With regard to claim 4 the device operates until a stop (reference item 108) is activated by an arm (reference item 106).

With regard to claim 7 Kriz *et al.* discloses that the force transducer can be a piezoelectric force transducer. Piezoelectric devices are known to be a broad description of either piezoresistive or piezocapacitive devices. In either case the transducer if Kriz *et al.* produces a signal, indicative of the pressure applied, that varies with the amount of force applied to the plunger.

With regard to claims 8-11 the controller will continuously control the driving motor when a force is sensed by the force transducer for at least one stage.

With regard to claims 12-14 and 16 the motor and plunger button are connected to plunger (reference item 20) via a rod-shaped coupling device (reference item 104). The plunger is guided up and down via a cylinder (not numbered).

With regard to claim 15 the device operates until a stop (reference item 108) is activated by an arm (reference item 106) that is connected to the rod.

With regard to claims 17 and 18 the device is a pipette, and a tip is clearly shown in figure 3. Tips are known in the art to be removable and disposable.

With regard to claim 19 Rainin *et al.* teaches that it is known to provide a pushbutton (reference item 52) that is actuated when the operator desires to remove and dispose of a pipette tip (reference item 60). This allows the user to avoid contact with the tip and any dangerous contaminants that might exist.

Kriz *et al.* teaches the use of a force transducer to detect the force applied to a plunger button of a proportioning device. Kriz *et al.* does not teach a force transducer integrated into the actuating device.

Pushbuttons are common and used in many pipetting devices. For example, Rainin *et al.* teaches that pipettes comprises several pushbuttons (reference items 26 a, 26b, 28a, 28b, 30, and 32) for controlling the function of the pipette. Pushbuttons 30 and 32 are used to actuate a motor in order to aspirate fluid into or dispense fluid from the pipette's tip.

Finally, Gaffney *et al.* teaches that it is known to utilize force sensing resistors (FSRs) (reference item VG) to control a motor (reference item 14). In particular, Gaffney *et al.* teaches that a manual actuator (reference item 28) is utilized in conjunction with the FSR to control the voltage to, and therefore the speed of the motor. Gaffney *et al.* also teaches that the manual actuator can be in the form of pushbutton; i.e., a membrane keypad wherein a finger applied to the membrane button applies differential pressure to the FSR. See paragraph 0041.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Kriz *et al.* with the teachings of Rainin *et al.*, Gaffney *et al.*, and Tekscan to provide a pushbutton having an FSR to actuate and control the speed of the motor. Modifying the actuator (reference item 60) of Kriz *et al.* to be a pushbutton with the pressure sensor (reference item 92) would help ensure that the pressure sensor was not damaged over time. Furthermore, as taught by Tekscan, FSRs are durable, have better sensor properties such as output linearity than any other thin film sensor, and are highly accurate and reliability for such applications as the medical industry.

Allowable Subject Matter


5. Claim 22 is allowed.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David A. Rogers whose telephone number is (571) 272-2205. The examiner can normally be reached on Monday - Friday (0730 - 1600). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


06 April 2006


HEZRON WILLIAMS
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